BEFORE

THE PUBLIC SERVICE COMMISSION OF

SOUTH CAROLINA

DOCKET NO. 2021-2-E

April __, 2021

IN RE: **Annual Review of Base Rates for Fuel Costs for Dominion Energy South Carolina, Inc.**	)	**JOINT PROPOSED ORDER APPROVING FUEL COSTS AND ADOPTING STIPULATION**

I. INTRODUCTION

This matter comes before the Public Service Commission of South Carolina ("Commission") on the annual review of the fuel purchasing practices and policies of Dominion Energy South Carolina, Inc. ("DESC" or "Company") and for a determination as to whether any adjustment in the fuel cost recovery factors is necessary and reasonable. The procedure followed by the Commission in this proceeding is set forth in S.C. Code Ann. § 58-27-865 (2015). Additionally, and pursuant to S.C. Code Ann. § 58-39-140 (2015), the Commission must determine in this proceeding whether an increase or decrease should be granted in the fuel cost component designed to recover the incremental and avoided costs incurred by the Company to implement the Distributed Energy Resource ("DER") program previously approved by the Commission. The period under review in this Docket is January 1, 2020, through December 31, 2020 ("Review Period").

A. Notice and Interventions

By letter dated August 17, 2020, the Clerk's Office of the Commission instructed the Company to publish a Notice of Hearing and Prefile Testimony Deadlines ("Notice") in

newspapers of general circulation in the area affected by the Commission's annual review of the Company's fuel purchasing practices and policies by October 8, 2020. The letter also instructed the Company to furnish the Notice to its customers by October 8, 2020, by U.S. Mail via bill inserts or electronically to customers who have agreed to receive notice electronically. The Notice indicated the nature of the proceeding and advised all interested parties desiring participation in the scheduled proceeding of the manner and time in which to file appropriate pleadings. On September 15, 2020, the Company filed with the Commission affidavits demonstrating that the Notice was duly published in newspapers of general circulation in accordance with the instructions set forth in the Clerk's Office's August 17, 2020 letter. On November 23, 2020, the Company filed with the Commission an affidavit demonstrating that the Notice was appropriately furnished to each affected customer.

Timely Petitions to intervene were received from the South Carolina Energy Users Committee ("SCEUC"), CMC Steel South Carolina ("CMC Steel"), and the South Carolina Coastal Conservation League ("SCCCL") and the Southern Alliance for Clean Energy ("SACE"). The petitions to intervene of SCEUC, CMC Steel, and SCCCL and SACE were not opposed by DESC, and no other parties sought to intervene in this proceeding. The South Carolina Office of Regulatory Staff ("ORS") is automatically a party pursuant to S.C. Code Ann. § 58-4-10(B) (2015 & Supp. 2020).

B. The Stipulation

On April 1, 2021, after the pre-filing of direct testimony by the parties and after all parties had been afforded a full opportunity to conduct discovery in this matter, ORS filed with the Commission a Stipulation executed by DESC, ORS, and SCEUC (collectively, the "Stipulating Parties"). SCCCL, SACE, and CMC Steel were not signatories to the Stipulation. While SCCCL

and SACE presented testimony in opposition to certain issues agreed upon by the Stipulating Parties, CMC Steel did not present any such testimony. CMC Steel sought leave to be excused from appearing at the hearing on Monday, April 5, 2021, and CMC Steel's leave to not appear was granted on April 7, 2021.

Among other things, the Stipulating Parties agreed as follows:

1) DESC's calculation of the NEM Methodology and method of accounting for avoided and incremental costs for NEM during the Review Period were reasonable and prudent, were consistent with methodology approved in Commission Order No. 2015-194, and complied with S.C. Code Ann. § 58-40-10, *et seq.* (2015).
2) DESC has met the utility-scale and customer-scale goals as prescribed by S.C. Code Ann. § 58-39-130 (2015). During the Review Period, DESC reasonably and prudently incurred costs in implementing the Company's Distributed Energy Resource Program, as approved in Commission Order No. 2015-512.
3) The cumulative balances of DESC's DER program costs as of December 31, 2020, totaled an over-collected balance of $738,982 in avoided costs and an under-collected balance of $5,620,037 in incremental costs, which are reasonable and prudent. The cumulative balances of DESC's DER program costs as of April 30, 2021, are projected to be an over-collected balance of $507,871 in avoided costs and an under-collected balance of $7,100,680 in incremental costs, which are reasonable and prudent.
4) DESC reasonably projected its DER program costs for the period January 1, 2021, through April 30, 2022, which are reflected in Corrected Exhibit Nos. ___ (AWR-6) through ___ (AWR-9) attached to the direct testimony of Company witness Rooks.

5) DESC's proposed DER Avoided Cost Component amounts by class, as set forth below, are reasonable and prudent, and, if approved by the Commission, shall become effective for the period beginning with the first billing cycle of May 2021.

Class	DER Avoided Cost Component (¢/kWh)
Residential	0.042
Small General Service	0.037
Medium General Service	0.029
Large General Service	0.020

6) DESC's proposed monthly per account DER Incremental Cost Components by class, as set forth below, properly allocate DESC's DER program incremental costs, are reasonable and prudent, and, if approved by the Commission, shall become effective for the period beginning with the first billing cycle of May 2021.

Class	Monthly Per Account DER Incremental Cost Component
Residential	$ 1.00
Small & Medium Gen. Svc.	$ 6.15
Large General Service	$ 100.00

7) The NEM Riders to Retail Rates, entitled Second Net Energy Metering for Renewable Energy Facilities and Third Net Energy Metering for Renewable Energy Facilities, attached hereto as Attachments A and B, including the rates, terms, and conditions, are lawful, just, and reasonable, and, if approved by the Commission, shall become effective for the period beginning with the first billing cycle of May 2021.

8) DESC made reasonable efforts to maximize generating unit availability and minimize fuel costs and took appropriate corrective action with respect to outages that occurred during the Review Period.

9) Subject to any adjustments set forth in ORS's pre-filed direct testimony, DESC's accounting practices are in compliance with S.C. Code Ann. § 58-27-865 (2015).

10) DESC's net cumulative over-collected balance of total base fuel, variable environmental, and avoided capacity costs for the period ending December 31, 2020 totaled $55,898,521, and its estimated net cumulative over-collected balance of total base fuel, variable environmental, and avoided capacity costs through April 2021 totaled $49,571,802. As of December 31, 2020, the net cumulative over-collected balance of $55,898,521 consists of cumulative over-collected base fuel costs of $52,090,275 and cumulative over-collected variable environmental and avoided capacity costs of $3,808,246. As of April 2021, the estimated net cumulative over-collected balance of $49,571,802 consists of cumulative over-collected base fuel costs of $44,697,895 and cumulative over-collected variable environmental and avoided capacity costs of $4,873,907.

11) The appropriate fuel factors for DESC to charge pursuant to this Stipulation for the period beginning with the first billing cycle of May 2021 and extending through the last billing cycle of April 2022 are listed below.

Class	Base Fuel Cost Component (¢/kWh)	Variable Environmental & Avoided Capacity Cost Component (¢/kWh)	DER Avoided Cost Component (¢/kWh)	Total Fuel Costs Factor (¢/kWh)
Residential	2.413	0.068	0.042	2.523
Small General Service	2.413	0.058	0.037	2.508
Medium General Service	2.413	0.046	0.029	2.488
Large General Service	2.413	0.031	0.020	2.464
Lighting	2.413	0.000	0.000	2.413

12) If approved by the Commission, the rates proposed herein would increase the average monthly bill of a Rate 8 residential customer using 1,000 kWh per month from $122.31 to approximately $123.90, a net increase of approximately $1.59 or 1.30%.

13) The Stipulating Parties agree that the fuel factors set forth above are consistent with S.C. Code Ann. § 58-27-865 (2015) and that, except as otherwise provided in the Stipulation, any and all challenges to DESC's historical fuel costs recovery for the period ending December 31, 2020, are not subject to further review; however, the projected fuel costs for the period beginning January 1, 2021, and thereafter shall be an open issue in future fuel costs proceedings held under the procedure and criteria established in S.C. Code Ann. § 58-27-865 (2015).

14) The tariff sheet entitled, "Adjustment for Fuel, Variable Environmental, & Avoided Capacity, and Distributed Energy Resource Program Costs," attached hereto as Attachment C, including the rates, terms, and conditions, is lawful, just, and reasonable, and, if approved by the Commission, shall become effective for the period beginning with the first billing cycle of May 2021.

15) The Stipulating Parties agree that it is reasonable and prudent for the Company to include in the Base Fuel Component its labor costs regarding nuclear fuel procurement, nuclear core design, safety analysis, and fabrication surveillance and final receipt inspection. The Company agrees that it will not recover other labor costs through the Fuel Clause Statute without first seeking and obtaining review by interested parties and approval by the Commission. The Company further agrees that it will make all proper accounting adjustments to remove these labor costs from its base rates to ensure that there is no double counting of these costs.

16) Upon written request, DESC will provide the following to the Stipulating Parties:

a. Copies of the monthly fuel recovery reports currently filed with the Commission and ORS; and

b. Forecasts of the expected fuel factors to be set at DESC's next annual fuel proceeding using DESC's historical (over)/under-collected balance to date following the quarters ending June 30th and September 30th, 2021, and forecasted prices for uranium, natural gas, coal, oil, and other fuel required for the generation of electricity. The forecasts will also provide the expected DERP charge to be set at the Company's next annual fuel proceeding based upon DESC's historical (over)/under-recovery to date and DESC's forecast of DERP incremental and avoided costs. DESC agrees it will put forth reasonable efforts to forecast the expected fuel factors to be set at its next annual fuel proceeding; however, the Parties agree that these quarterly forecasts will not be admitted into evidence in any future DESC proceeding.

17) The Stipulating Parties agree that the Company's "Rider to Residential Rates and Time-of-Use Demand Rate 28 – Net Metering for Renewable Energy Facilities" should be eliminated because it terminated on December 31, 2020, and because all customers previously taking service under this rider have been transitioned to other rate schedules for which they are eligible.

II. STATUTORY STANDARDS AND REQUIRED FINDINGS

S.C. Code Ann. § 58-27-865(B) (2015) states in pertinent part that, "[u]pon conducting public hearings in accordance with law, the [C]ommission shall direct each company to place in effect in its base rate an amount designed to recover, during the succeeding twelve months, the fuel costs determined by the [C]ommission to be appropriate for that period, adjusted for the over-recovery or under-recovery from the preceding twelve-month period."

III. HEARING

In order to consider the merits of this case, the Commission convened a virtual hearing on this matter on April 8, 2021, with the Honorable Florence P. Belser presiding. DESC was represented at the hearing by Matthew W. Gissendanner, Esquire; Michael Anzelmo, Esquire; Mitchell Willoughby, Esquire; and Tracey C. Green, Esquire. SCEUC was represented by Scott Elliott, Esquire. SCCCL and SACE were represented by Kate Lee Mixson, Esquire and Kurt D. Ebersbach, Esquire. ORS was represented by Jeffrey M. Nelson, Esquire, and Jenny R. Pittman, Esquire.

At the outset of the hearing, ORS counsel introduced the Stipulation. The Stipulation was admitted into the record as Hearing Exhibit 1 and is attached hereto and incorporated herein as Order Exhibit No. 1.

Through their virtual personal appearances, DESC presented the direct testimonies of George A. Lippard, III; Rose Jackson; Michael D. Shinn; and Mark Furtick, and the direct testimonies and exhibits of Henry E. Delk, Jr.; Tom A. Brookmire; Eric Bell; and Allen W. Rooks. Through their virtual personal appearances, the ORS presented the direct testimonies and exhibits of William Kleckley; Brandon S. Bickley; O'Neil O. Morgan; and Michael Seaman-Huynh. And through his virtual personal appearance, SCCCL and SACE presented the direct testimony and exhibits of R. Thomas Beach. SCEUC and CMC Steel did not present witnesses at the hearing.

Through their virtual personal appearance, DESC presented the corrected and responsive testimony and exhibits of Witness Rooks in response to corrected direct testimony filed by Witness Bell and the direct testimony filed by Witnesses Seaman-Huynh and Morgan. In turn, ORS presented the surrebuttal testimony of Witnesses Kleckley and Morgan in response to Witness Rooks' corrected and responsive testimony.

Through their virtual personal appearance, DESC presented the rebuttal testimony of Witnesses Margot Everett and Bell in response to the direct testimony of SCCCL and SACE Witness Beach.

Through his virtual appearance, SCCCL and SACE presented the surrebuttal testimony of Witness Beach in response to the rebuttal testimony of Witnesses Everett and Bell.

IV. REVIEW OF THE EVIDENCE AND EVIDENTIARY CONCLUSIONS

After considering and evaluating the evidence and testimonies of the witnesses, the Commission reaches the following factual and legal conclusions:

A. NEM Distributed Energy Resources Methodology[1]

1. DESC Testimony

Witness Bell testified that, by way of its Order No. 2015-194 issued in Docket No. 2014-246-E, the Commission approved the following 11 components of value for NEM Distributed Energy Resources:

Net Energy Metering Methodology

1. +/- Avoided Energy
2. +/-Energy Losses/Line Losses
3. +/- Avoided Capacity
4. +/- Ancillary Services
5. +/- T&D Capacity
6. +/- Avoided Criteria Pollutants
7. +/- Avoided CO_2 Emission Cost
8. +/- Fuel Hedge
9. +/-Utility Integration & Interconnection Costs
10. +/- Utility Administration Costs
11. +/- Environmental Costs

= Total Value of NEM Distributed Energy Resources

He further testified that, as directed by the Commission in Order No. 2020-244 issued in Docket No. 2019-184-E, the Company submitted the current components of value of NEM Distributed Energy Resources to the Commission by letter dated March 26, 2020.

Witness Bell stated that the Company updated these components of value by calculating the current value and a value for the ten-year levelized period, as set forth in Table 2 of his corrected direct testimony:

[1] By way of background, the Commission has pending a separate matter, Docket No. 2019-182-E, which is commonly called the "Generic Docket" and is entitled "South Carolina Energy Freedom Act (H.3659) Proceeding Initiated Pursuant to S.C. Code Ann. Section 58-40-20(C): Generic Docket to (1) Investigate and Determine the Costs and Benefits of the Current Net Energy Metering Program and (2) Establish a Methodology for Calculating the Value of the Energy Produced by Customer-Generators." Also pertinent to DESC and pending is Docket No. 2020-229-E, entitled "Dominion Energy South Carolina, Incorporated's Establishment of a Solar Choice Metering Tariff Pursuant to S.C. Code Ann. Section 58-40-20 (See Docket No. 2019-182-E)." In addition, the Commission has recently initiated Docket No. 2021-88-E, entitled "Dominion Energy South Carolina, Incorporated's 2021 Avoided Cost Proceeding Pursuant to S.C. Code Ann. Section 58-41-20(A)."

	Current Period ($/kWh)	10-Year Levelized ($/kWh)	Components
1	$0.02877	$0.03163	Avoided Energy Costs
2	$0	$0.00379	Avoided Capacity Costs
3	$0	$0	Ancillary Services
4	$0	$0	T & D Capacity
5	$0.0000011	$0.0000011	Avoided Criteria Pollutants
6	$0	$0	Avoided CO_2 Emission Cost
7	$0	$0	Fuel Hedge
8	($0.00096)	($0.00096)	Utility Integration & Interconnection Costs
9	$0	$0	Utility Administration Costs
10	$0.00126	$0.00120	Environmental Costs
11	$0.02907	$0.03566	Subtotal
12	$0.00237	$0.00291	Line Losses @ 0.9245
13	$0.03145	$0.03857	**Total Value of NEM Distributed Energy Resources**

Witness Bell acknowledged that ORS discovered that the Company had inadvertently recorded a scheduled maintenance outage at the Jasper Generating Station as running from October 24, 2021 to October 27, 2021, when it actually was scheduled to run from October 24, 2021, to November 27, 2021. Witness Bell further testified that, when investigating the error identified by ORS, the Company determined that a single output variable, titled "energy not served costs," was inadvertently omitted from the original calculations of the Company's avoided energy costs. He testified that the Company updated its calculations to correct both errors, and those calculations were included in the Table 2 submitted as part of his corrected direct testimony.

Witness Bell further explained DESC's evaluation of each component and its associated value (identified here by reference to the line numbers in the table above):

1. The Company bases its calculation of avoided energy costs on its PURPA avoided cost values, except that it removes and separately states the cost of criteria pollutants and environmental costs in components of value on lines 6 and 10 in accordance with the methodology set forth in Commission Order No. 2015-194.

2. This component is set to $3.79/MWH for the 10-Year Levelized calculation pursuant to Commission Order No. 2020-244.

3. The Company has determined this component of value is zero but addresses certain non-zero costs under the integration costs in line 8.

4. The Company has determined that its NEM distributed resources do not avoid any transmission or distribution capacity and, thus, that the value of this category is zero. Because the transmission and distribution peak load occurs on a cold winter morning most often before sunrise and before a PV solar system provides any significant production, distributed solar does not assist in meeting the peak load and so the value of this category is zero.

5. The Company has determined that there is a positive avoided cost value of NO_x and SO_2, which it has removed from the avoided energy costs category and stated those items here in accordance with Commission Order No. 2015-194.

6. Commission Order No. 2015-194 states that this component of value is set to zero until such time as federal or state laws or regulations yield an avoidable cost for CO_2 emissions. Thus, the Company has determined that the value of this category is zero because there presently are no such federal or state laws or regulations.

7. Because DESC does not hedge fuels for electric generation, the value of this category is zero.

8. This component of value was set to $0.96/MWH in Commission Order No. 2020-244.

9. Because the administration costs of NEM Distributed Energy Resources are collected through a DER rider added to the fuel clause, the value of this component is zero.

10. As noted above, environmental costs have been separated from avoided energy costs and set forth here in accordance with the methodology from Commission Order No. 2015-194.

11. Line 11 is a subtotal of the preceding amounts.

12. This category represents the cumulative marginal line losses experienced at a residential customer's meter.

Witness Rooks sponsored the Company's proposed "Rider to Retail Rates – Second Net Energy Metering for Renewable Energy Facilities" tariff sheet, Composite Hearing Exhibit No. 6 (AWR-13), and its proposed "Rider to Retail Rates – Third Net Energy Metering for Renewable Energy Facilities" tariff sheet, Composite Hearing Exhibit No. 6 (AWR-15), both of which update the total value of NEM Distributed Energy Resource to reflect the components of value for NEM Distributed Energy Resources enumerated by Witness Bell.

2. ORS Testimony

Witness Morgan testified that the Company updated the value of NEM Distributed Energy Resources as reflected in Table 2 set forth in Witness Bell's testimony. He testified the Company is seeking a value of NEM distributed generation of $0.03145 over a one-year planning horizon and $0.03857 over a ten-year planning horizon. He testified that the one-year value is used to determine the NEM incentive, and that the Company uses the difference between the one-year and ten-year values to determine the NEM future benefits.

3. SCCCL and SACE Testimony, Responsive Testimony, and the Commission Conclusions

Witness Beach made several recommendations and comments regarding the Company's updated components of value for the NEM Distributed Energy Resources methodology. His recommendations, DESC's responses, and the Commission's conclusions regarding each recommendation are set forth below.

a. Witness Beach recommends a value of $0.1428/kWh for solar, "which exceeds the retail rate," based on his calculations in testimony he filed in Docket No. 2019-182-E and attached as Hearing Exhibit No. 7 (RTB-2) to his direct testimony:

Avoided Cost Component	**Value** *(25-year levelized $ per kWh)*
Energy	0.0383
Generation capacity	0.0135
Line losses	0.0049
Transmission capacity	0.0186
Distribution capacity	0.0227
Fuel Hedge	0.0335
GHG Compliance Costs	0.0112
Total	**0.1428**

DESC disagrees and as testified by Witness Bell, submits that the appropriate valuation is contained in Table 2 of his testimony and as set forth above. Witness Everett recommends that the Commission accept the figures proposed by DESC. Further, in Order Exhibit No. 1, the ORS and SCEUC agreed that in this proceeding that "DESC's calculation of the NEM Methodology and method of accounting for avoided and incremental costs for NEM during the Review Period were reasonable and prudent, were consistent with methodology approved in Commission Order No. 2015-194, and complied with S.C. Code Ann. § 58-40-10, *et seq*. (2015)".

The Commission rejects Witness Beach's proposed valuation of NEM Distributed Energy Resources. It finds that much of the analysis he advances is more appropriate for the docket in which the bulk of his testimony originally was tendered, namely Docket No. 2019-182-E. The Commission finds that his recommendation of a solar value well in excess of the Company's retail rates, which contemplate the inclusion of all of the Company's costs, is unreasonable and further finds that his analysis is flawed for the reasons further explained below. The Commission further finds that Witness Beach's testimony on cross-examination that he did not read Witness Bell's testimony before preparing his prefiled direct testimony weighs against accepting his recommendations.

b. Witness Beach recommends a value of 0.0383/kWh for avoided energy costs based on his calculations. He asserts that new "solar generation will displace the marginal source of electric energy on the Dominion system." He states that the Company's ten-year levelized energy prices should be escalated over a 25-year period, with his 25-year price representing a 21 percent increase over the ten-year price.

Witness Bell testifies that a ten-year planning period is appropriate for determining the value of NEM Distributed Energy Resources. He notes that, although Order No. 2015-194 does not prescribe a time period, Act No. 62 uses ten years for PURPA Qualified Facilities and the Company believes this is the appropriate period to use. He notes that using longer periods to calculate avoided costs will result in customers overpaying for solar based on declining avoided costs. He states that the actual avoided cost is reduced as more solar is added over time, which results in customers paying more for solar in future years than the current avoided costs. He notes that this practice also results in increased fuel costs.

Witness Everett testifies that Witness Beach's estimate of avoided energy costs rests on values that are outdated and that he uses an excessive annual growth rate to inflate the costs over 25 years. She first notes that it is based on out-of-date marginal energy costs. She further notes that the estimate is inflated in two ways. First, he estimates the value over 25 years while NEM methodology contemplates a ten-year period based on Act No. 62. Witness Everett opines that this overstates the value by about ten percent. Second, Witness Beach escalates his value by about 6.7% annually between 2030 and 2045, even though his estimate greatly exceeds the 2.7% Compound Annual Growth Rate derived from EIA" s "Annual Energy Outlook 2020," Table 13, "Natural Gas Supply, Disposition, and Prices, Reference Case." She further states that his estimate of avoided energy costs is unclear because he seems to include criteria pollutants and avoided environmental costs in his calculation.

Witness Beach responds that although new estimates "may change the starting point of [his] analysis," his conclusion that solar is undervalued would not change. He further states that a ten-year period is not required because the Act No. 62 provisions regarding ten years pertain to power purchase agreements for utility scale generation. He testified that distributed solar has an economic life of 25 to 30 years, and that its benefits will be significantly understated if it is valued only for the first ten years and then assumed to be zero. Witness Beach further testifies that he agrees with Witness Everett that costs related to criteria pollutants and environmental costs should be listed separately from avoided energy costs, but that these costs are not readily available to separate without access to the detailed production cost model outputs.

The Commission finds that the Company's calculation of avoided energy costs is appropriate and reasonable and consistent with the directives of Order No. 2015-194. The Commission further finds that a ten-year planning period is appropriate based on Act No. 62 as

well as the nature of the programs in place and that using longer periods at this stage could result in the overpayment of avoided costs by customers. Further, the Commission finds that Witness Beach's failure to use the current values and his failure to exclude criteria pollutants and environmental costs from the analysis renders his determination of avoided energy costs fundamentally flawed.

c. Witness Beach recommends a value of $0.0135/kWh for avoided generation capacity costs. He bases his calculation on a solar PV capacity contribution of 34% and thus asserts that "34% of a solar PV project's capacity may be assumed to contribute to meeting DESC's capacity needs in its peak load hours." He testified that $77.74/kW-year is an appropriate value for the avoided generation capacity costs.

Witness Bell notes in his testimony that Witness Beach's assertion is generally based on the testimony of another witness in another docket and that those assertions are inaccurate. Witness Bell states that "solar has a zero avoided generating capacity value because DESC's resource plans are based on winter peaks typically occurring before the sun rises in the morning and before solar has begun to generate." He also testifies that Witness Beach's calculation does not consider the ten-year value assigned to avoided capacity costs as required by Order No. 2020-244, whereas DESC's proposals do use a ten-year value. Witness Bell testifies that there is no value assigned to this category because the Company's reserve margins currently are adequate and it does not expect to add resources during the ten-year period.

Witness Bell further testifies that he disagrees with Witness Beach's use of a 34% solar contribution rate because, as noted above, the winter peak typically occurs before the sun rises. He states that the winter peak is critical to consider because there is a higher winter reserve margin; the utility scale solar PPAs contribute to the summer peak but not the winter peak; and the peak

load forecast is higher in the winter. He states that Witness Beach identified situations when solar contributed to meeting the daily peak, but that is not the same as contributing to meeting the winter peak. He notes that DESC's calculations and analyses "have consistently determined that additional levels of stand-alone PV solar generation have no or almost no capacity value on the winter peak."

Witness Everett testifies that Witness Beach's calculation of avoided generation capacity costs is not correct because it ignores the 11.8% solar contribution rate recently adopted by this Commission and was instead an unapproved contribution rate of 34%, nearly three times this Commission's approved value. She states that he also ignores the avoided generation capacity costs of $66.76/kW-year established in Docket 2019-184-E. She testifies that applying these correct amounts results in a solar value of $7.88/kW, and that estimating the level of generation from a 1kW solar project over one year with a 23.8% capacity factor yields an estimate of $0.000379/kWh.

Witness Beach responds that he is not ignoring the Commission-approved value for capacity values but considers them incorrect and out-of-date. He states that Witness Everett's values do not reflect lifecycle benefits and do not adequately account for avoided capacity contributions of distributed solar. He states that he believes his analysis is consistent with Act No. 62.

The Commission finds that the Company's calculation of avoided generation capacity costs is appropriate and reasonable. The Commission finds that Witness Beach's use of 34% for a solar contribution is inconsistent with the current methodological requirements of a 11.8% solar contribution. Witness Beach's estimated solar contribution also fails to consider that solar does not assist in alleviating the winter peak, which occurs on the Company's system on a winter

morning before the sun rises. The Commission also finds that Witness Beach's calculation of avoided generation costs does not consider the avoided capacity costs established in Docket No. 2019-184-E of $66.76-kW-year and, instead, uses a higher rate that Witness Beach calculated. Because Witness Beach's analysis does not consider the values in effect at the time of this proceeding, his calculation is flawed and must be rejected.

d. Witness Beach states that the Company improperly assigned a value of zero to ancillary services, though he does not specifically quantify a value for that category in his analysis.

Witness Bell responds that ancillary services, which "refers to the need to balance the load and generation on the Company's system," is zero because none of the current or anticipated DER generators can provide these services.

Witness Beach responds that avoided costs refers to the costs for utility resources that are not produced because of the use of distributed solar and, thus, the provision of ancillary services by the distributed solar is not relevant.

The Commission finds that a zero value for ancillary services is appropriate and reasonable. Other than to say that none of the NEM Distributed Energy Resources calculation numbers should be zero, Witness Beach does not specifically quantify the value of ancillary services. The Company identifies the basis for its determination that the value of this category is zero. The Commission therefore rejects his assertions.

e. Witness Beach recommends a value of $0.0186/kWh for avoided transmission capacity costs. He explained that he applied the NERA regression method to compute his estimate and described his calculations as best practice. He further recommends a value of $0.0227/kWh for avoided distribution capacity costs. He calculated this value using the same methodology as he applied to avoided transmission capacity costs.

Witness Bell testifies that because the most severe transmission and distribution peak loads presently occur on cold winter mornings on the Company's system, "most often before sunrise and always before significant production from PV solar systems," the value of transmission and distribution avoided costs is zero. He further notes that even if there is some contribution from distributed solar, "that contribution cannot be quantified or relied on for planning or contingencies due to the intermittent nature of the resource." He further testified that, on the distribution system, it is necessary to design a circuit for circumstances in which the circuit may experience stress and, with respect to solar, for when distributed solar is not supplying power. That is, he testifies, the distribution line must carry the load when DERs are generating and when they are not. Consequently, DERs do not provide any benefit with respect to avoiding transmission and distribution costs and appropriately have a zero value.

Witness Everett disagreed with Witness Beach's calculations. She states that, with respect to transmission costs, Witness Beach incorrectly uses transmission costs not related to load growth. She further states that Witness Beach also applies a solar capacity contribution value of 42.5% with no evidence that transmission costs are avoided as a result of solar generation, and further notes that historical data from DESC shows that only 48% of on-site generation offsets customer use. She observed that DESC has demonstrated in multiple dockets that transmission costs cannot be avoided or saved by generation from a solar customer-generator, in large part because the generation from a customer-generator is intermittent and thus cannot be relied on in planning. She testified also that Witness Beach inflates his estimates too much based on his use of a 25-year period. She also testified that DESC has calculated avoided capacity costs for the purpose of evaluating energy efficiency programs and that it calculated a value of $7.67/kW, which is 89%

lower than Witness Beach's estimate. But she also notes that the avoided transmission costs value remains zero because solar customer-generation does not offset transmission capacity needs.

Witness Everett further testified that Witness Beach's estimate of distribution costs is overstated because he includes costs not related to peak demand growth. She notes that he also uses a solar capacity contribution value of 35.6% without demonstrating that value is appropriate, and that he incorrectly uses the 25-year period. She also noted that the Company determined a value of $18.58/kW in distribution avoided costs for purposes of evaluating energy efficiency programs, which is 80% lower than the value estimated by Witness Beach. However, because the Company cannot rely on customer-generation to meet customer needs, the value of distribution avoided costs equals zero.

Witness Beach responds that an avoided transmission and distribution capacity benefit has been quantified in nearly every other jurisdiction, including by Duke utilities operating in South Carolina. He further testifies that DESC has refused to conduct a study to quantify the avoided transmission and distribution capacity costs of solar.

The Commission finds that a zero value for transmission and distribution capacity costs is reasonable and appropriate. As noted above, solar does not contribute to reducing the winter peak on the Company's system and, thus, a zero value for this category is warranted. The Commission also finds that Witness Beach's calculation is flawed because he does limit his analysis only to transmission and distribution costs involving load growth. The Commission further finds that Witness Beach erroneously used a 25-year future period versus ten years, and that his inflation adjustments are unreasonably high. And the Commission finds that the fact that other utilities may have transmission and distribution avoided costs based on their operating system does not mean that DESC has such avoided costs.

f. Witness Beach recommends a value for fuel hedging of $0.0335/kWh. He states that renewable generation provides a long-term hedge against fuel costs for a 25-year period. He recommends calculating this benefit using a methodology assuming that the Company contracts for future natural gas supplies today, then places the money needed to buy that gas in risk-free investments.

Witness Bell responds that the Company does not hedge natural gas purchases and, thus, a zero value is appropriate for this category. He states that Witness Beach equates renewables generation to a hedging program and proposes assigning a value based on that characterization, but that his proposal serves to double count this fuel cost benefit of renewables because that benefit already is captured in avoided energy costs.

Witness Everett testifies that Witness Beach's analysis fails to account for the need to purchase gas when the renewable generators are not available, and also fails to consider the fact that gas prices during those times tend to be higher because demand is higher. She also notes that gas prices may run higher during scarcity events, and Witness Beach does not consider the risk that scarcity events will occur when the level of renewable power is low. She notes that the short-term value for DESC should be zero because the NEM methodology requires considering costs to offset short term costs and DESC does not hedge gas costs.

Witness Everett further testified that, with respect to the long-term hedging values noted by Witness Beach, avoided costs include some level of generation to meet load from a portfolio, which includes renewables. She states that this benefit grows larger as there is more renewable energy to displace gas generation. Thus, she testifies, including a hedging value based on the existence of renewables is double counting.

Witness Everett concluded by stating that Witness Beach's description of hedging is flawed because gas hedging is a physical gas purchase agreement or a financial instrument that accounts for the difference in an agreed to price and the actual market price, returning the difference to the utility. But in both cases, the payment occurs when the gas is delivered to the utility. While the seller may be required to post some collateral to guard against the risk that the seller does not deliver if the price of gas increases, these collateral requirements would be small and not produce the cash outlay contemplated by Witness Beach. Consequently, she states, the cost of hypothetical long-term hedging is equal to zero. She further notes that Witness Beach's approach does not actually hedge the cost of gas because the utility simply is placing funds aside to purchase gas in the future, which means the utility loses the use of those funds in the interim. This is not a hedge, but just the holding of funds until a future date.

Witness Beach responds that Witness Everett misunderstands the nature of avoided costs with respect to the inclusion of some level of renewables because avoided costs are costs not taken because of the use of the renewable output of distributed solar. He states that the avoided resources are largely gas-fired utility plants whose costs fluctuate with short-term gas prices. He testifies that replacing this generation with fixed-price renewables avoids this cost-volatility and provides a long-term hedge to ratepayers. He states that the hedging value would be zero only if no fossil generation is avoided.

The Commission finds that a zero value for hedging is reasonable and appropriate. The Company does not hedge its fuel costs and, thus, the cost for this category would be zero. The Commission further finds that Witness Beach's hypothetical gas hedging analysis is not consistent with the actual fuel hedging contemplated by Order No. 2015-194 and, thus, is not appropriate for

consideration in this proceeding. As Witness Everett testifies, Witness Beach's concept of fuel hedging bears no relationship to what fuel hedging actually is.

g. Witness Beach recommends a value of $0.0049 for line losses. He states that distributed solar avoids distribution line losses because most of the power exported from small customer-generated solar facilities is consumed by the customer's immediate neighbors and, thus, avoids the need to deliver power to customers from remote utility-scale generation facilities. He concludes that avoided line losses from distributed solar "will be very similar to the avoided losses for power consumed behind the solar customer's meter."

Witness Everett testifies that Witness Beach's calculation is based on an alternative analysis that is not adequately described. She notes that his estimated losses are far in excess of the historically applied 7.55% and that he appears to apply different loss factors for capacity versus energy. She recommends that the Commission reject Witness Beach's calculation and instead use the current methodology of 7.55% until such time as the Commission may decide upon a different analysis in a proceeding convened for the purpose of evaluating the appropriate NEM Distributed Energy Resources methodology.

Witness Beach recognizes that the NEM Distributed Energy Resources methodology remains under consideration in Docket No. 2019-182-E and recommends that any revisions to the methodology in that docket should be applied to this docket.

The Commission finds that the Company's calculations of line losses are reasonable and appropriate. Witness Beach's calculations are based on an alternative calculation and not the 7.55% historically applied under the methodology required by Order No. 2015-194. Because Witness Beach's analysis does not consider the values in effect at the time of this proceeding, his calculation is flawed and must be rejected.

h. Witness Beach recommends a value of $0.0112/kWh for GHG compliance costs. He states that reducing future carbon emissions is a significant driver of utilities' IRPs and, thus, the value of reducing carbon should not be assumed at zero. He testified that he calculated a value based on DESC's 2020 IRP adjusted for inflation, a conversion factor of one MMBtu of natural gas producing 117 pounds of CO_2, and a 6,550 Btu/kWh marginal system heat rate.

Witness Bell testifies that the value of CO_2 emission is zero because the Commission expressly recognized in Order No. 2015-194 that CO_2 emissions would be zero "until state or federal laws or regulations result in an avoidable cost on Utility systems for these emissions." Consequently, because there is currently no federal or state law or regulation in this regard, the value properly is zero.

Witness Everett states that Witness Beach's calculation is inaccurate. She also notes that the NEM Methodology states that CO_2 will be zero until such time that the state or federal laws or regulations include costs. She further testifies that the GHG costs Witness Beach references are dated because DESC has since refiled its IRP and included values for carbon ranging from $0/MT to $35/MT, with $12/MT being the expected case, but that figure will only come into effect in 2030. This would yield a level of $1.20/ton versus Witness Beach's calculation of $32.03/MT.

Witness Beach responds that although the future regulation and costs for mitigating carbon emissions are not certain, DESC's IRP makes clear that reducing future carbon emissions is a "significant driver of those plans" and, thus, carbon costs are not zero because utilities are planning and spending money today to reduce those emissions.

The Commission finds that a zero value for environmental costs is reasonable and appropriate. As Witnesses Bell and Everett noted, Order No. 2015-194 requires the use of a zero value until such time as federal or state statutory or regulatory requirements impose a cost in this

regard. Witness Beach's analysis therefore conflicts with the type of carbon costs contemplated by Order No.2 015-194. Consequently, because Witness Beach's analysis does not consider the values in effect at the time of this proceeding, his calculation is flawed and must be rejected.

i. Witness Beach testifies that, based on his calculations of the NEM Distributed Energy Resources valuation methodology, distributed solar passes all cost effectiveness tests. He states that residential distributed solar appears to pass the Standard Practice Manual cost-effectiveness tests. He highlights that his methodology analyzes the benefits and costs from multiple perspectives of the key stakeholders, including the utility system as a whole, participating NEM/DER customers, and other ratepayers; considers a comprehensive list of benefits and costs that considers the location, diversity, and technologies of distributed generation; and analyzes the benefits and costs in a long-term, lifecycle time frame that corresponds to the useful life of the solar system.

Witness Everett responds that residential solar passes all of Witness Beach's cost effectiveness tests because he uses inflated values for the NEM Distributed Energy Resources categories. She applies a series of tests based on the values of solar as determined by DESC and concludes that solar does not pass cost-effectiveness tests.

The Commission finds that Witness Beach's cost-effectiveness analysis is not appropriate for consideration in this proceeding. Rather, the Commission must consider the appropriate values for NEM Distributed Energy Resources based on Order No. 2015-194 and subsequent orders interpreting and applying the NEM methodology. The Commission therefore rejects Witness Beach's proposals.

j. Witness Beach testifies that the Commission should use societal costs in assessing the effectiveness of NEM Distributed Energy Resources. He testifies that certain societal benefits

can be quantified and that others should be considered qualitatively. Specifically, he testifies that the health benefits of reduced emissions of criteria pollutants, reduced methane leakage, the additional benefits of reduced carbon emissions, and land use benefits can be quantified. He further testifies that rooftop solar enhances the reliability and resiliency of customer electric service, that distributed solar enhances customers' freedom, choice, and engagement, and that rooftop solar leverages a new source of capital to expand South Carolina's clean energy infrastructure.

Witness Bell notes that none of the societal benefits identified by Witness Beach are included in the calculation required by Order No. 2015-194. He states that those benefits should not be included because they are "not readily susceptible to objective calculation and, moreover, are not utility costs the Company can avoid." He further testifies that federal and state tax credits include the value of the societal benefits of solar and, thus, including those again would be double counting.

Witness Everett testifies that externality benefits such as societal costs are difficult to quantify and dependent upon numerous and contentious assumptions. She further notes that externality costs are not avoided by the utility and, thus, including those costs in setting rates will cause the utilities' costs to increase and would result in a cost shift. And she testified that if a utility must provide additional compensation for these externality costs, the utility will be required to charge customers for this additional compensation and cause the Commission to effectively become a taxing authority.

Witness Beach responds that he estimates the quantifiable benefits of solar to be about 17 cents/kWh, which exceeds the value of federal and state tax credits to customers.

The Commission rejects Witness Beach's recommendation to consider societal costs in this proceeding. As stated above, the issue of whether to include societal benefits in the analysis is not

appropriate for consideration in this proceeding. Rather, the Commission must consider the appropriate values for NEM Distributed Energy Resources based on Order No. 2015-194 and subsequent orders interpreting and applying the NEM methodology. The Commission therefore rejects Witness Beach's proposals regarding consideration of societal costs.

k. Witness Beach also testifies that all of the categories of benefits and costs in the value stack of NEM Distributed Energy Resources set forth in Order No. 2015-194 are quantifiable. He stated that if "there is uncertainty about the magnitude of a specific benefit or cost, the default should not be to assign a zero value to that category, but to examine several cases that span a range of reasonable values for this benefit or cost and use that review to establish a reasonable value."

In response, Witness Bell testified that if the Company uses "a zero value for any of the NEM Distributed Energy Resources categories, it is not a default value but is the product of careful analysis of the category characteristics as applied to DESC's system." Witness Everett testified similarly, stating that the Company does not arbitrarily set values to zero and that the values are not "'set' to zero but rather calculated as zero." She explained there are two steps to this process. First, it is necessary to quantify the avoided cost value for each component. Second, it is necessary to determine the amount of energy or capacity that is avoided through customer generation. She testified that in Step 1, Witness Beach provided an estimate of the avoided cost value using his own calculations, methodologies, assumptions, and data that are inconsistent with approved values or are erroneous. She further testified that in Step 2, Witness Beach deviates from Commission approved estimates of the contribution of customer generation to avoiding these costs. She also testified that because solar does not avoid any capacity for the Company, the value of these categories properly is zero.

Witness Beach responded that setting the values at zero versus calculating them at zero is a distinction without a difference. He testified that the Company assumes that capacity costs cannot be avoided by customer solar generation, which is inconsistent with utility experiences across the country, including in the southeast. He further testified that just because a category originally was included in the methodology as a placeholder does not mean that the value should always be zero, but that inclusion was done at that time only to facilitate a settlement. He states that the Commission should reevaluate the value of distributed solar and that his testimony in this proceeding simply is reiterating his position in Docket No. 2019-182-E.

The Commission finds that the Company's calculations are appropriate and that, in some instances and as recognized above, it is reasonable that there will be a zero value. As Witness Everett testified, Order No. 2015-194 contemplates that some values will be zero at present until certain conditions are satisfied. In other instances, a category may have a zero value for DESC even if other utilities have a positive value based on the nature of DESC's system. The Commission finds that the Company's recommendations for the value of NEM Distributed Energy Resources are reasonable and appropriate for the reasons set forth above.

B. Proposed Base Fuel Component

1. DESC Testimony

Witness Rooks testified that the actual base fuel over-collected balance was $52,090,275 as of December 31, 2020, and the over-collected balance is projected to be $44,697,895 at the end of April 2021. Witness Rooks also testified that the Company proposes to increase its Base Fuel Component to 2.413 cents per kWh for the period May 2021 through April 2022. As discussed in more detail below, he further testified that the Company is proposing that Variable Environmental & Avoided Capacity Cost Components be reduced for all classes of customers for the period May

2021-April 2022; that DER Avoided Cost components be slightly increased for Residential and Large General Service customer classes, slightly decreased for the Medium General Service customer class, and maintained for the Small General Service customer class; and that the Company's DER Incremental Cost Component per account per month be maintained at $1.00 for Residential and $100 for Large General Service customers and increased to $6.15 for Small/Medium General Service customers.

2. ORS Testimony

Witness Kleckley testified that "it is ORS's opinion, that subject to the Company's Adjustments, the Company's accounting practices are in compliance with S.C. Code Ann. §§ 58-27-865, 58-39-130, 58-39-140, 58-40-20, and prior Commission Orders." He further testified that, as of December 2020, the Company had a base fuel costs over-recovery balance of $52,090,275, a variable environmental and avoided capacity over-recovery balance of $3,808,246, a DERP avoided costs over-recovery balance of $738,982; and a DERP incremental costs under-recovery balance of $5,620,037. As shown on Hearing Exhibit No. 9 (WCK-5), page 2 of 2, as of April 2021, ORS projects the Company to have an estimated base fuel costs over-recovery balance of $44,697,895, an estimated variable environmental and avoided capacity over-recovery balance of $4,873,907, and an estimated DERP avoided costs over-recovery balance of $507,871. He further testified that ORS agrees with the Company's estimated DERP incremental costs under-recovery balance of $7,100,680 as of April 2021.[2]

[2] Witness Kleckley testified that ORS estimated the DERP incremental costs under-recovery balance as $7,100,673, and that the difference from the Company's estimate was due to rounding.

Witness Seaman-Huynh testified that ORS proposed that the Company address any over/under recovered balance caused by the Jasper Generating Station projected outage error in next year's fuel proceeding. Witness Rooks responded that this approach is reasonable for this proceeding and that the Company does not object.

3. SCCCL and SACE Testimony

SCCCL and SACE did not present any testimony regarding the Company's proposed base fuel component.

4. Commission Conclusions Regarding the Proposed Base Fuel Cost Component

As reflected in the evidence of record, no party challenged DESC's proposed Base Fuel Cost Component. Based upon the evidence and testimony of the witnesses and the Stipulation between ORS and the Company, the Commission finds that the proposed fuel rates, combined with the Company's proposals in the DSM and Pension Dockets, would increase residential bills by $1.59 per month or 1.30% compared to current rates and finds and concludes that the Company's proposed Base Fuel Component is reasonable and prudent and is consistent with S.C. Code Ann. § 58-27-865 (2015).

C. Fuel Purchasing Practices, Environmental Costs, Power Plant Operations, and Fuel Inventory Management

1. DESC Testimony

DESC witnesses testified in support of the stipulation and on issues related to the prudency of DESC's fuel purchasing practices, power plant operations, and fuel inventory management, and explained the regulatory atmosphere governing environmental compliance for DESC. Witness Lippard discussed the operating performance of the V.C. Summer Nuclear Station. Witness Delk reviewed the operating performance of the Company's non-nuclear generating units and of South

Carolina Generating Company's Williams Electric Generating Station. Witness Brookmire discussed the nuclear fuel purchasing processes for DESC generation, uranium prices, and the near-term outlook of coal and uranium prices. Witness Shinn discussed the Company's procurement and delivery activities for coal and No. 2 fuel oil for electric generation, the changes that have occurred in coal markets since the last annual fuel adjustment hearing, and how these changes affected coal procurement during the Review Period and are anticipated to affect future procurement. Witness Shinn also discussed the procurement and delivery of limestone for the wet scrubbers at Wateree and Williams Stations. Witness Jackson provided testimony about the natural gas purchasing processes for DESC generation and discussed natural gas prices as well as the near-term outlook.

Witness Rooks provided actual fuel cost data for the historical Review Period, and projected fuel costs for the period January 1, 2020, through April 30, 2022; and recommended fuel rates for the period of May 2021 through April 2022. Composite Hearing Exhibit No. 5 (AWR-5) shows the Company's forecasted variable environmental and avoided capacity costs and the allocation of those costs to retail customer classes for the period of May 2021 through April 2022. This exhibit also details forecasted sales data by class, over/under recovery computations, and calculates the projected Variable Environmental & Avoided Capacity Cost Components per kWh for the same period. Witness Rooks testified that, as shown in Composite Hearing Exhibit No. 5 (AWR-5), the Company is proposing that Variable Environmental & Avoided Capacity Cost Components be reduced for all customer classes for the period May 2021-April 2022. The Variable Environmental & Avoided Capacity Cost Components produced by these calculations are projected to recover all costs and are as follows: 0.68 cents per kWh for the Residential rate class; 0.58 cents per kWh for the Small General Service rate class; 0.46 cents per kWh for the Medium

General Service rate class; and 0.31 cents per kWh for the Large General Service rate class. Witness Rooks also sponsored the Company's proposed "Adjustment for Fuel, Variable Environmental & Avoided Capacity, and Distributed Energy Resource Costs" tariff shown in Composite Hearing Exhibit No. 6 (AWR-11).

Witness Brookmire also discussed the Company's proposal to change its method of recognizing and expensing labor costs with respect to the design, analysis, and fabrication of nuclear fuel assemblies. He testified that, currently and historically, the Company has expensed labor costs through O&M labor costs in base rates as those costs were incurred. Under the Company's proposal, labor costs related to nuclear fuel procurement, nuclear core design, safety analysis, and fabrication surveillance and final receipt inspection would be recovered through the Company's fuel factor, whereas labor costs "not tied directly to the design, analysis, or fabrication, such as engineering labor costs for reactor operation support, plant fuel handling labor costs, attending general fuel-related industry meetings, regulatory fees, or industry lobbying expenses, would be excluded from the fuel factor and continue to be expensed through O&M labor costs." He also testified that other Dominion Energy entities record labor costs in this same manner.

Witness Brookmire explained that the Company seeks to make this change because, unlike fossil fuels, nuclear fuel assemblies are manufactured products requiring extensive design and engineering, and then are fabricated and delivered to the reactor site, where they are used for approximately 3-5 years before being discharged. As part of the creation of a nuclear fuel batch, the Company will incur internal and external costs for engineering as well as material acquisition (uranium), chemical processing (conversion), U_{235} isotope changes (enrichment), and fuel assembly fabrication steps. He observed that these steps are often contracted for years in advance.

Witness Brookmire testified that the costs associated with converting raw fuel into a usable form for a nuclear reactor are varied and not limited to just the cost of the raw fuel. Specifically, fabrication costs include "the cost of engineering services associated with specifying the design of the fuel assemblies to be used in an upcoming reload batch." Further, the Company will incur costs to ensure the suitability of the fabricated fuel to be inserted into the reactor core, including costs associated with engineering design, engineering analyses, and other internal costs to ensure that the design and analytical results comply with established safety requirements. Witness Brookmire testified that a "newly designed batch of fuel assemblies includes a customized set of fabrication specifications including, but not limited to, uranium enrichment, burnable absorber content, rod and assembly power distribution, rod internal pressures, and fuel dimensions." And he noted that these "types of design and analysis parameters must take into account the irradiation history of the non-discharged (approximately two-thirds of the reactor core) irradiated fuel, the projected energy generation of the subsequent reactor core, and must ensure that the fabricated fuel will meet fuel design and established requirements for safety."

Witness Brookmire testified that, because "fabricated nuclear fuel can be purchased in a completed "turn-key" bundled fashion, meaning that the total costs for procurement, materials, engineering, and fabrication are included in the supplier's delivered price for each nuclear fuel assembly, then all of these costs would be allowable as a batch capital cost." He noted that the Federal Energy Regulatory Commission has recognized that the Company, like many nuclear reactor operators, complete many of the necessary batch design and analysis steps using its own personnel in order to ensure greater cost control and more control over security and supply. He stated that, when the Company incurs some of these costs on its own and shares responsibility with the fabrication supplier for completion of these steps, it is proper to include these costs in the batch

costs captured in FERC Account 120.1 and to ultimately recover those costs through the fuel factor.

Witness Rooks testified that, from the customer's standpoint, things would be effectively the same because these expenses are removed from base rates and instead recovered through fuel costs. He stated that, essentially, the Company is capitalizing those expenses. He noted that other Dominion Energy entities record nuclear fuel assembly labor costs in this same manner and that Duke Energy does so as well. He testified that the Company will implement this change through capitalizing these costs. He explained that the Company determined that approximately $248,450 of these costs are in base rates in the test year. This equates to a monthly amount of $20,704, which, if the Commission accepts the Company's proposal, the Company will credit back to retail fuel costs beginning in May 2021 in order to ensure no double counting. Witness Rooks noted that the amount of these labor costs in base rates is approximately 0.6% of the $41,200,000 of nuclear fuel expenses incurred in calendar year 2020. Witness Rooks confirmed that these amounts would not be included in base rates going forward if the Commission approves this change.

Witness Brookmire explained that the Company seeks to implement this change as part of the reporting period that began on January 1, 2021. If approved, a small amount of these labor costs would be recognized in fuel costs planned for a fuel batch that will be placed into service late in the 2021 reporting period. However, due to the manner in which fuel batches are processed, the majority of these costs would not be recognized in fuel costs until later in the 2024 reporting period.

2. ORS Testimony

Witness Kleckley testified and presented the results of the ORS Audit Department's examination of the Company's books and records pertaining to the Fuel Adjustment Clause

operation for the Review Period, and the Company's estimated calculations for the months of January 2021 through April 2021. Based on the ORS Audit Department's examination of the Company's books and records, and the Company's operation of the fuel cost recovery mechanism, Witness Kleckley verified that the Company's accounting practices are in compliance with S.C. Code Ann. §§ 58-27-865, 58-39-130, 58-39-140, and 58-40-20 (2015 & Supp. 2020) and prior Commission orders. Witnesses Seaman-Huynh and Bickley testified to the ORS's findings resulting from its review of the Company's fuel expenses and power plant operations used in the generation of electricity during the Review Period. Based on ORS's review of the Company's operation of its generating facilities during the Review Period, Witness Bickley verified that the Company made reasonable efforts to maximize generating unit availability and minimize fuel costs during the Review Period.

Witness Seaman-Huynh testified that ORS "has no objection to the Company's proposal to include labor costs regarding nuclear fuel procurement, nuclear core design, safety analysis, and fabrication surveillance and final receipt inspection in the Base Fuel Component." He stated that ORS determined that Duke Energy recovers these types of costs through the Fuel Clause statute. He further testified that "ORS determined, through discovery, the Company is not currently recovering the additional labor costs through currently approved fuel rates." He stated that ORS recommends that (1) the Company not be allowed to recover any other labor costs through the Fuel Clause statute without review by interested parties and Commission approval and (2) that if the Company's recommendation is approved, the Company be required to make the proper accounting adjustments and remove those costs from its base rates to ensure no double counting of these costs.

Witness Seaman-Huynh agreed with Witness Rooks that the Company's customers will be held harmless by the proposed labor costs change in that there would be a reduction in the Company's base rates for the amount of the nuclear fuel design labor costs that would then be recovered through fuel rates. He testified that it would be a pass through to customers, as are all fuel expenses, and that any changes would be reviewed on an annual basis.

Witness Seaman-Huynh further testified that he believed that the Company was proposing this change now because Dominion Energy is looking to integrate the South Carolina operations into the company as a whole and is trying to apply best practices to all of their entities. He further stated that he believed that Dominion Energy is trying to have the same operating system "whether it be for nuclear fuel or accounting" for Dominion Energy as a whole. Witness Seaman-Hunh further testified that he believed customers would receive a benefit from Dominion having a uniform system for its design of nuclear fuel versus a different system in South Carolina versus other states. He testified that it would be in Dominion's interest to operate under a uniform system, and that if this is beneficial to Dominion, he thought customers might save some money.

Witness Seaman-Huynh also testified that, while the Company could seek to obtain a turn-key product from a single entity, expenses can be saved if there are ways for the Company to perform some of the required analyses in house. Witness Seaman-Huynh testified that ORS would ensure that nothing is double-counted because it has a robust audit process and because, if the request is approved, the Company would be making offsetting adjustments to its base rates to make sure there is no double counting. And he testified that ORS is accustomed to dealing with utilities that operate in multiple states and is accustomed to making sure that costs are allocated properly. He stated that ORS would apply the same procedures it uses for Duke and other utilities to ensure that South Carolina residents pay only for what they use.

3. SCCCL and SACE Testimony

SCCCL and SACE did not present any testimony related to the prudency of DESC's fuel purchasing practices, power plant operations, and fuel inventory management, or to the Company's labor costs proposal.

4. Commission Conclusions Regarding Fuel Purchasing Practices, Environmental Costs, Power Plant Operations, and Fuel Inventory Management

Based upon the evidence and testimony of the witnesses, the Commission therefore finds and concludes that DESC's fuel purchasing practices and policies, environmental costs, power plant operations, and fuel inventory management during the Review Period are reasonable and prudent.

The Commission further finds and concludes that DESC's proposal to include certain labor costs regarding nuclear fuel procurement, nuclear core design, safety analysis, and fabrication surveillance and final receipt inspection in the Base Fuel Component is reasonable and prudent and approved for implementation as of the reporting period that began January 1, 2021. The Company may not recover any other types of labor costs through the Base Fuel Component without prior Commission approval after review by interested parties. The Company is directed to make all proper and necessary adjustments to remove these labor costs from its base rates in order to ensure that no double counting of these costs is incurred.

D. DER Programs and Costs

1. DESC Testimony

Witness Furtick discussed the performance of the Company's DER programs during the Review Period, and the costs associated with offering these DER programs during the Review Period. These programs include offering utility-scale DER programs, customer-scale Net Energy

Metering (NEM) incentives, Performance Based Incentives, Bill Credit Agreement program, and the Community Solar program. Witness Furtick also discussed the Company's DER cost projections for the forecast period January 1, 2021, through April 30, 2022.

Witness Furtick testified that, as a result of the Company's efforts with respect to DER programs, the balance of DER program costs at the end of the Review Period totaled an over-collected balance of $738,982 in avoided costs and an under-collected balance of $5,620,037 in incremental costs. For the period January 1, 2021, through April 30, 2022, the Company projects that DER program costs will include $9,880,760 in avoided costs and $26,824,649 in incremental costs.

Witness Rooks provided actual data on the Company's DER avoided and incremental costs for the historical Review Period and the projected DER costs for the period January 1, 2020, through April 30, 2022. Witness Rooks testified that, as shown in Composite Hearing Exhibit No. 5 (AWR-7), the Company is recommending the following DER Avoided Cost components for the period May 2020 through April 2021: 0.42 cents per kWh for the Residential rate class; 0.37 cents per kWh for the Small General Service rate class; 0.29 cents per kWh for the Medium General Service rate class; and 0.20 cents per kWh for the Large General Service rate class. He also testified that, as reflected in Composite Hearing Exhibit No. 6 (AWR-9), the Company's DER program Incremental Costs by class should be: $1.00 per account per month for the Residential rate class; $6.15 per account per month for the Small/Medium General Service rate class; and $100.00 per account per month for the Large General Service rate class. As noted above, Witness Rooks sponsored the Company's proposed "Adjustment for Fuel, Variable Environmental & Avoided Capacity, and Distributed Energy Resource Costs" tariff, as reflected in Composite Hearing Exhibit No. 6 (AWR-11).

Witness Furtick testified that the Company has achieved the utility-scale and customer-scale goals as prescribed by S.C. Code Ann. § 58-39-130 (2015). As of December 31, 2020, DESC has nine solar farms totaling 48.16 MW interconnected to DESC's distribution system as part of the Company's approved DER program. DESC also has 11,338 customers participating in its customer-scale DER programs as of December 31, 2020, providing approximately 91.03 MW of solar generating capacity on the Company's system.

Witness Rooks testified that the proposed adjustment to fuel rates reflects the true-up of the updated avoided costs, variable integration charges, and NEM methodology costs approved by the Commission in Docket No. 2019-184-E with those costs remaining in effect since Docket No. 2018-2-E. He noted that the Company is planning to book this true-up in the first quarter of 2021 and that this true-up is included in the DER Avoided and Incremental Costs forecasts included in Composite Hearing Exhibit No. 5 (AWR-6) and Composite Hearing Exhibit No. 6 (AWR-8). He testified that the effect of the true up is an increase to DER Avoided Costs of $48,627 and an increase to DER Incremental Costs of $250,939.

Witness Furtick also testified that DESC had achieved Act 236's net metering limit or cap of 2% in 2019 and that, by letter dated May 16, 2019, in Docket No. 2014-216-E, had "informed the Commission that it had achieved the 2.0% NEM threshold and that it had not accepted NEM applications submitted after May 3, 2019." Witness Furtick noted, however, that, in Act No. 62 of 2019 ("Act 62"), the South Carolina General Assembly eliminated the 2% NEM threshold previously found in S.C. Code Ann. § 58-40-20(B) (2015). Witness Furtick testified that, accordingly, in order to comply with Act 62, DESC previously submitted two revised tariffs to the Commission. The first, a "Rider to Retail Rates – Second Net Energy Metering for Renewable Energy Facilities" tariff, "reflects the closure of NEM 2.0 effective May 4, 2019. The second, a

"Rider to Retail Rates – Third Net Energy Metering for Renewable Energy Facilities" tariff, "eliminates the 2% NEM threshold and makes net energy metering available to those customers who apply for it from May 17, 2019, through May 31, 2021." Mr. Furtick notes that these tariffs were approved by the Commission in Order No. 2019-392, dated May 29, 2019.

Regarding the Company's Community Solar program, Witness Furtick testified that Springfield Solar, a 6 MW facility in Orangeburg County, and Nimitz Solar, an 8 MW facility in Jasper County, entered commercial operation in June 2018, and that Curie Solar, a 2 MW facility in Hampton County, entered commercial operation in February 2019. According to Witness Furtick, as of December 31, 2020, 1,095 customers have either purchased or subscribed to 15.968 MW of the available 16 MW of community solar capacity. The remaining 0.032 MW of capacity is reserved for Low-Income customers and will be filled via a separate waitlist created by the marketing of DESC, Clean Energy Collective, and eight Community Assistance Agencies.

2. ORS Testimony

Witness Morgan testified that the Company's DER program calculations comply with Act No. 236 of 2014 and Commission Orders, and that the Company's calculations support DESC's proposed DER program charges. He further testified that, as testified to by Witness Rooks and in compliance with Commission Order No. 2019-229-E issued in Docket No. 2019-2-E, the Company will in the first quarter of 2021 record its true-up of the updated avoided cost rates, the value of NEM Distributed Energy Resources, and the Variable Integration Charges as reflected in Composite Hearing Exhibit No. 5 (AWR-6) and Composite Hearing Exhibit No. 6 (AWR-8). He further testified that the effect of recording these true ups will be an increase to DER avoided costs of $48,627 and an increase to DER incremental costs of $250,939.

Witness Morgan further testified that the Company calculated the NEM incentive using the methodology approved by Commission Order No. 2015-194. He stated that the Company determined the difference in the expected revenues from NEM customers with and without DER programs in place. The Company then calculated the value of the customers' distributed generation using the NEM tariff approved in Commission Order No. 2020-331 and determined the NEM incentive by dividing the outstanding revenue by the number of kilowatt hours the customers of each applicable rate schedule generated. He stated that ORS found the Company's proposed tariffs as included in Composite Hearing Exhibit No. 6 (AWR-8) and (AWR-9) and supporting calculations to be reasonable and in line with the methodology approved by Commission Order No. 2015-194.

3. SCCCL and SACE Testimony

SCCCL and SACE did not present any testimony regarding the DER programs offered by the Company during the Review Period or the associated costs.

4. The Commission's Overall Conclusions Regarding DER Programs and Cost

The Commission finds that the evidence presented by DESC establishes that, during the Review Period, DESC offered DER programs and that the Company has met its statutorily designated goals as set by S.C. Code Ann. § 58-39-130 (2015). The Commission further finds that the Company's DER programs and the associated costs as currently constituted are reasonable and prudent.

V. FINDINGS OF FACT AND CONCLUSIONS OF LAW

DESC's fuel purchasing practices and policies, power plant operations, fuel inventory management, and all other matters associated with S.C. Code Ann. § 58-27-865 (2015) were reasonable and prudent.

DESC has met the utility-scale and customer-scale goals as prescribed by S.C. Code Ann. § 58-39-130 (2015). During the Review Period, DESC reasonably and prudently incurred costs in implementing the Company's Distributed Energy Resource Program, as approved in Commission Order No. 2015-512.

The updated components of value for NEM Distributed Energy Resources as shown in Table 2 on Page 10 of the direct testimony of DESC Witness Bell are reasonable and prudent, comply with the NEM methodology approved by the Commission in Order No. 2015-194, properly evaluate and/or quantify all categories of potential costs or benefits to DESC's system, and satisfy the requirements of S.C. Code Ann. § 58-40-10, *et seq.* (2015).

During the Review Period, DESC offered DER programs and took steps to fulfill its DER goals approved by the Commission in Order No. 2015-194, which programs and steps were reasonable and prudent, complied with Order Nos. 2015-194 and 2015-512, and were designed to meet DESC's statutorily designated goals as set by S.C. Code Ann. § 58-39-130 (2015).

As a result of DESC's efforts to provide the DER programs, the over-collected balance of the DER program costs as of December 31, 2020, totaled $738,982 in avoided costs and an under-collected balance of $5,620,037 in incremental costs, which costs are reasonable and prudent.

DESC's proposed DER Avoided Cost Components by class are reasonable and prudent. DESC's proposed monthly per account DER Incremental Cost Components by class properly allocate DESC's DER program incremental costs and are reasonable and prudent.

DESC's proposed "Adjustment for Fuel, Variable Environmental, & Avoided Capacity, and Distributed Energy Resource Costs" tariff sheet, including the rates, terms, and conditions, is lawful, just, and reasonable.

Approval of the Stipulation is consistent with the standards for fuel review proceedings conducted pursuant to S.C. Code Ann. § 58-27-865 (2015). The Stipulation allows recovery by DESC of fuel costs as precisely and promptly as possible and in a manner to assure public confidence and minimize abrupt changes in charges to customers. Additionally, the Commission finds and concludes that the Stipulation, while being final and conclusive for the Review Period, affords the Stipulating Parties with the opportunity to review costs and operational data in future fuel review proceedings conducted pursuant to S.C. Code Ann. § 58-27-865 (2015). As such, it is in the public interest as a reasonable resolution of the issues in this case. We also find that the resolution of issues among the Stipulating Parties as set forth in the Stipulation does not appear to inhibit economic development.

IT IS THEREFORE ORDERED THAT:

1. The Stipulation, incorporated herein by this reference, and attached hereto as Order Exhibit No. 1, is found to be a reasonable resolution to the issues in this case, is in the public interest, and is therefore hereby adopted and approved.

2. The fuel purchasing practices and policies, power plant operations, fuel inventory management, and all other matters associated with S.C. Code Ann. § 58-27-865 (2015) of DESC are reasonable and prudent for the period January 1, 2020, through December 31, 2020.

3. DESC's proposed revisions to its "Adjustment for Fuel, Variable Environmental, & Avoided Capacity, and Distributed Energy Resource Costs" tariff sheets are lawful, just, and reasonable, and are hereby approved for bills rendered on, during, and after the first billing cycle in May 2021.

4. The updated components of value for NEM Distributed Energy Resources listed in Table 1 below comply with the NEM methodology approved by the Commission in Order No.

2015-194, properly evaluate and/or quantify all categories of potential costs or benefits to DESC's system, and satisfy the requirements of S.C. Code Ann. § 58-40-10, *et seq*. (2015):

Table 1

	Current Period ($/kWh)	**10-Year Levelized ($/kWh)**	**Components**
1	$0.02877	$0.03163	Avoided Energy Costs
2	$0	$0.00379	Avoided Capacity Costs
3	$0	$0	Ancillary Services
4	$0	$0	T & D Capacity
5	$0.0000011	$0.0000011	Avoided Criteria Pollutants
6	$0	$0	Avoided CO_2 Emission Cost
7	$0	$0	Fuel Hedge
8	($0.00096)	($0.00096)	Utility Integration & Interconnection Costs
9	$0	$0	Utility Administration Costs
10	$0.00126	$0.00120	Environmental Costs
11	$0.02907	$0.03566	Subtotal
12	$0.00237	$0.00291	Line Losses @ 0.9245
13	$0.03145	$0.03857	**Total Value of NEM Distributed Energy Resources**

5. DESC's proposed revisions to its "Rider to Retail Rates – Second Net Energy Metering for Renewable Energy Facilities" and "Rider to Retail Rates – Third Net Energy Metering for Renewable Energy Facilities" tariff sheets are lawful, just, and reasonable and are hereby approved for use on, during, and after the first billing cycle in May 2021.

6. DESC's DER programs offered during the Review Period were reasonable and prudent, complied with Commission Order Nos. 2015-194 and 2015-512, and were designed to meet DESC's statutorily designated goals as set by S.C. Code Ann. § 58-39-130 (2015).

7. DESC's proposed monthly per kWh DER Avoided Cost Components by class, as set forth below, properly allocate DESC's DER program avoided costs, are reasonable and prudent, and are hereby approved for bills rendered on, during, and after the first billing cycle in May 2021.

Class	DER Avoided Cost Component (¢/kWh)
Residential	0.042
Small General Service	0.037
Medium General Service	0.029
Large General Service	0.020

8. DESC's proposed monthly per account DER Incremental Cost Components by class, as set forth below, properly allocate DESC's DER program incremental costs and are reasonable and prudent, and are hereby approved for bills rendered on, during, and after the first billing cycle in May 2021.

Class	Monthly Per Account DER Incremental Cost Component
Residential	$ 1.00
Small & Medium Gen. Svc.	$ 6.15
Large General Service	$ 100.00

9. DESC shall set its Base Fuel Cost Component, Variable Environmental & Avoided Capacity Cost Components and Total Fuel Cost Factors consistent with the amounts set forth in the table below effective for bills rendered on and after the first billing cycle of May 2021.

Class	Base Fuel Cost Component (¢/kWh)	Variable Environmental & Avoided Capacity Cost Component (¢/kWh)	DER Avoided Cost Component (¢/kWh)	Total Fuel Costs Factor (¢/kWh)
Residential	2.413	0.068	0.042	2.523
Small General Service	2.413	0.058	0.037	2.508
Medium General Service	2.413	0.046	0.029	2.488
Large General Service	2.413	0.031	0.020	2.464
Lighting	2.413	0.000	0.000	2.413

10. DESC will track any over- or under-recovery of costs related to the Jasper Generating Station outage forecast error to be addressed in next year's fuel proceeding.

11. The Commission further approves as reasonable DESC's proposal to include certain labor costs regarding nuclear fuel procurement, nuclear core design, safety analysis, and fabrication surveillance and final receipt inspection in the Base Fuel Component beginning with the reporting period that started January 1, 2021. The Commission notes that this change will result in a better matching of the recognition of the expenses of the fuel assemblies with when the assemblies actually are used and will also serve to facilitate the uniformity of DESC's procedures with its related companies. The Company may not, however, recover any other types of labor costs through the Base Fuel Component without prior Commission approval after review by interested parties. The Company is directed to make all proper and necessary adjustments to remove these labor costs from its base rates in order to ensure that no double counting of these costs occurs.

12. The Commission directs that the Company's "Rider to Residential Rates and Time-of-Use Demand Rate 28 – Net Metering for Renewable Energy Facilities" be eliminated because

it terminated on December 31, 2020, and because all customers previously taking service under this rider have been transitioned to other rate schedules for which they are eligible.

13. ORS, DESC, and SCEUC shall abide by all terms of the Stipulation.

14. DESC shall file with the Commission the tariff sheets and rate schedules approved by this Order and all other retail tariff sheets within ten (10) days of receipt of this Order, and also serve copies on the Parties. The fuel rates reflected in any such tariff sheets shall be consistent with the components and factors set forth herein. The revised tariffs should be electronically filed in a text searchable PDF format using the Commission's DMS System (https://dms.psc.sc.gov/). An additional copy should be sent via e-mail to etariff@psc.sc.gov to be included in the Commission's ETariff system (https://etariff.psc.sc.gov). DESC shall provide a reconciliation of each tariff rate change approved as a result of this order to each tariff rate revision filed in the ETariff system. Such reconciliation shall include an explanation of any differences and be submitted separately from the Company's ETariff filing. Each tariff sheet shall contain a reference to this Order and its effective date at the bottom of each page.

15. DESC shall comply with the notice requirements set forth in S.C. Code Ann. § 58-27-865(B) (2015).

16. DESC shall continue to file the monthly reports as previously required.

17. DESC shall account monthly to the Commission and ORS for the differences between the recovery of fuel costs through base rates and the actual fuel costs experienced by booking the difference to revenues with a corresponding deferred debit or credit. ORS shall monitor the cumulative recovery amount.

18. DESC shall submit monthly reports of fuel costs and scheduled and unscheduled outages of generating units with a capacity of 100 megawatts or greater to the Commission and ORS.

19. This Order shall remain in full force and effect until further Order of the Commission.

BY ORDER OF THE COMMISSION:

_____
Florence P. Belser, Vice Chair

ATTEST:

_____
Jocelyn Boyd, Chief Clerk/Executive Director

(SEAL)